



**FAWN**  
ELECTRONICS

# Integrator



*Happy Holidays  
and Best Wishes  
For the New Year*

Linking Our Customers, Associates and Suppliers

Fourth Quarter  
2006



*Above, an architect's rendering of the new facility.*

## Fawn Selects Site For New Facility

Fawn has announced plans for a new manufacturing site in the Nashville Business Center in Nash County, NC. When completed, the 47,000 sq. ft. facility will employ 90-100 employees and include SMT lines, automated through-hole lines, several chassis assembly lines and automated wire processing equipment.

"Our new facility will be located within 10 minutes of two major interstates, which logistically serves our customers well. Additionally, our regional economic development groups have worked hard to

create a package of incentives. This combined with our state-of-the-art equipment and highly skilled workforce lay a foundation for continued growth in both revenue and services offered," said Art Rutledge, Fawn's president.

Fawn's original plant site in Elm City, NC was destroyed in a fire in December 2005. The operation was relocated to a temporary facility in Wilson, NC and has since resumed full production. The Company has invested over \$2 million in new production equipment which includes replacement of previous capabilities,

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## Equipment Additions Continue

While 2006 has seen a number of equipment additions to replace equipment lost in last year's fire, Fawn has also added several new pieces of equipment designed to increase both throughput and capabilities.

Automated inspection capabilities have been enhanced with the addition of a YESTech YTX-3000-130 high resolution x-ray system and a YESTech YTV-F1S high resolution automated optical inspection (AOI) system.

According to Kim Boykin, v.p. operations, a key reason for selecting high resolution systems is to support trends in electronic assembly miniaturization.

"Our placement equipment is capable of placing 01005 components. While we haven't seen a customer requirement for that yet, we have had requirements for 0201s. We felt it was important to add inspection capability which was aligned with placement capability so that we could support our customers'

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needs for miniaturization over time," Boykin said.

"In addition to improving overall throughput, AOI also speeds up the first article approval process and provides an additional layer of process control," Boykin added.



**The YTV-F1S AOI system.**

Ball grid array (BGA) rework/repair capability was also added through a Pace TF2700 rework/repair station. Previously, BGA rework had been subcontracted. Quad flat packs (QFPs) had been reworked internally using a Craft 25 system. The new system handles both BGAs and QFPs. ■



**The TF2700 BGA rework system.**



**The YTX-3000-130 x-ray system.**

## Fawn Supports RoHS Conversion

Many companies didn't start analyzing the European Union's RoHS (Restriction of Hazardous Substances) seriously until it took effect on July 1, 2006. However, Fawn has been producing RoHS-compliant assemblies and supporting customer conversion efforts since late 2004.

Currently Fawn provides RoHS-compliant production to four major customers. In July, the Company added an Electrovert VectraElite solder wave with a quick-change solder pot that allows the users to switch between different solder alloys to better support both RoHS-compliant and leaded production.

Color-coded labels and color-coded solder mask help visually segregate RoHS-compliant materials and assemblies from leaded product in both the warehouse inventory and production floor. Where possible, RoHS-compliant and leaded production operations are physically segregated.

The main challenge facing customers who wish to migrate to RoHS-compliance is component availability. While a relatively minor issue today, there are still some components which do not have a RoHS-compliant part.

Fawn's RoHS conversion service is a good way for customers to make the transition. In this focused process, customers provide a copy of their full leaded product BOM with all levels exploded. Specifically the BOM should include: circuit designators, manufacturer's part numbers and alternate sources (where available). The leaded BOM is loaded into a spreadsheet with a pre-determined matrix designed to identify the key information needed to support the conversion process. Matrix fields include:

- Customer part number
- Contractor internal part number
- Description

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## Two Associates Recently Promoted



***Guy Bayless***

Guy Bayless has been promoted to Project Engineer. He originally joined Fawn in February 2005 as an Automation Technician.

He brings to his new position an extensive background in process and product engineering and management from GTE Sylvania, GE Medical Systems, BF Goodrich-Flight Systems and two North Carolina EMS companies. He will now be working closely with Fawn's Industrial/ Manufacturing Engineers and Customer Service group launching new customer assemblies and ensuring they continue flowing smoothly.

On a personal note, Guy has a private pilot's license and is an avid model airplane enthusiast.



***Patricia Howard***

Patricia Howard has been promoted to the position of Buyer/Expeditor.

This new role will give Fawn an opportunity to capitalize on Patricia's previous experience in sales and customer service functions prior to joining the Fawn team. She has worked with Fawn for over 6 years coordinating outgoing freight and associated documentation/data entry. Patricia's excellent computer skills and extensive experience working with Fawn's MRP system prepares her well for the new position.

Her personal interests include volunteering for the Wilson County Youth Athletic Association coaching for the girls soccer program. ■

## ISO Recertification Audit Completed In November

Fawn Electronics achieved a large milestone in late-November when it underwent an ISO 9001:2000 reassessment audit by BSI. While reassessment audits aren't normally as significant as initial certification, in this case the audit was reassessing a quality management system which had been completely re-established after last year's fire.

"While our disaster recovery system included documentation backup, we were naturally concerned that in our recovery process we might not have fully addressed every area a full

reassessment would cover. In fact, the audit actually demonstrated the converse. Our team had been incredibly thorough in restoring all elements of our quality management process," said Kim Boykin, v.p. operations.

Two auditors were used to complete a 6-day audit which took place Nov. 20-22. A certificate was issued in early December. Fawn's next full reassessment audit will take place in November 2009. ■

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as well as the addition of x-ray inspection and ball grid array (BGA) rework/repair capability. Both RoHS-compliant and leaded production capability are in place.

While site selection was tied to both available economic incentives and logistics efficiency, employee “buy-in” has also been important. Fawn transported its associates to the new site for the groundbreaking ceremony. Afterwards, associates were taken on a tour of the area.

“Our associates have done a tremendous job of supporting our recovery efforts. Although the move to this facility is nearly a year away, we want to do everything possible to eliminate any

concerns they may have about the new facility, commute distance or local amenities such as restaurants/shopping. Bringing our associates to the groundbreaking seemed a good way to start that process,” added Rutledge.

The new building should be complete in Q3 07. Move-in will be completed during Q4 07.

The Company has also added four new customers in the last quarter. The projects include: 2 telecommunications manufacturers, a manufacturer of high-end exercise equipment and an industrial controls manufacturer. ■

## RoHS *(continued from page 2)*

- Manufacturer part number
- Manufacturer phone number
- Manufacturer/distributor technical contact name
- Part’s compliance status
- If not compliant, anticipated compliance date
- Notes.

While the final BOM will be structured identically to the original BOM, during the conversion process the spreadsheet is typically ordered by component type and includes alternate sources where available. SMT components are typically the easiest to cross. Through-hole components may drive redesign issues, as some parts are not being converted. Plastics, hardware, overlays, adhesives and paper materials tend to be the most labor intensive to analyze and cross, as not all finishes or raw materials may be documented. Additionally, suppliers in this latter group may have the most inconsistencies in information dissemination.

Once compliant parts are identified, a compliance letter is downloaded from the supplier’s website which lists the numbers for the RoHS compliant parts. Ideally, documentation from each supplier should include a Declaration (Certification) and some understanding of the supplier’s processes for maintaining RoHS compliance during its manufacturing strategy.

are evaluated. Where possible, 2-3 alternate parts are identified to support materials availability planning, should compliance dates slip.

Finally, the conversion process takes into account the need for visual segregation of RoHS-compliant material. Blue solder mask is specified on printed circuit boards to ensure that RoHS-compliant assemblies will stand out in production. Part numbers are given an “R” suffix to ensure that they will be inventoried as RoHS compliant from the day they arrive at the factory. Incoming inspection processes further label and segregate this material.

The converted BOM includes a list of converted components, alternate part recommendations, a list of obsolete parts and redesign recommendations (where needed). Component data sheets are provided to support engineering review. Where design changes are recommended, a 15-20 piece prototype run is normally provided for the evaluation process. Once the review is complete and the customer signs off on it, the BOM is converted.

For assistance with this or any other Fawn service, contact your customer service or sales representative for additional information and a quote. ■

During the conversion process, critical dimensions and materials compatibility issues